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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,516	01/23/2004	Sang Woon Suh	1740-000042/US	5361
30593	7590	10/09/2007		
HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER DEBNATH, SUMAN	
			ART UNIT	PAPER NUMBER
			2135	
			MAIL DATE	DELIVERY MODE
			10/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/762,516

Applicant(s)

SUH ET AL.

Examiner

Suman Debnath

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 01/18/2005 & 07/21/2006
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Claims 1-53 are pending in this application.
2. Claim 26 has been amended in the preliminary amendment filed 18 November 2007.
3. Claims 27-53 have been newly presented.

### ***Priority***

4. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in the Republic of Korea on 23 January 2003, 27 January 2003 and 14 March 2003. It is noted, however, that applicant has not filed certified copy of the applications as required by 35 U.S.C. 119(b).

### ***Drawings***

5. Figure 1, 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

6. Claims 1, 14, 15 and 23-25 are objected to because of the following informalities:

Claim 1 and 23-26 recite "key information" in line 5; it is unclear whether Applicant refers to "key" information as being "important information" or "comprising an encryption or decryption key". Furthermore, the disclosure of the application doesn't enable "form intermittent or alternate wobbled pits" and "wherein key information for encryption and/or decryption is encoded in a deviation shape of said pits". Above subject matters which were not described in the specification in such a way as to enable one skilled in the art to which it pertains, or which it is most nearly connected to make and/or use the invention.

Claims 14 and 15 introduce an undefined acronym "RF".

Appropriate correction and/or clarification is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3 and 5-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki et al. (Patent No.: US 5,572,507) (hereinafter "Ozaki") and further in view of Sako et al. (Pub. No.: US 2003,0117920 A1) (hereinafter "Sako").

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9. As to claim 1, Ozaki discloses a recording medium including recorded data (abstract), comprising: pits formed along tracks, with data recorded therein (FIG. 1A, col. 5, lines 47-53), the data including copy protection information (col. 11, lines 29-32), wherein pits formed in some portions of the tracks are shifted from a track center to left and/or right to thereby form intermittent or alternate wobbled pits, wherein key information is encoded in a deviation shape of said pits shifted from the track center (FIG. 1A, col. 6, lines 45-57, col. 11, lines 29-32, col. 14, lines 27-57).

Ozaki doesn't explicitly disclose information for encryption and/or decryption. However, Sako discloses information for encryption and/or decryption ([0132]). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention was made to modify the teaching of Ozaki as taught by Sako in order to protect the copyrights of audio content and video content, thus prevent illegal copying.

10. As to claim 2, Ozaki doesn't explicitly disclose wherein the wobbled pits are in a lead-in zone of an information area of the recording medium. However, Sako discloses wherein the wobbled pits are in a lead-in zone of an information area of the recording medium ([0132]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Ozaki as taught by Sako in order to support copy protection of optical disc that has double-density recording area.

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11. As to claim 3, Ozaki discloses wherein the wobble pits are in a permanent information & control (PIC) data area of the information area of the recording medium (col. 5, lines 45-67).

12. As to claim 5, Ozaki discloses wherein data is encoded in the deviation shape of said wobbled pits (col. 5, lines 45-67).

13. As to claim 6, Ozaki discloses wherein said deviation shape has bi-phase modulated bit values (col. 5, lines 45-67, col. 11, lines 53-65).

14. As to claim 7, Ozaki doesn't explicitly disclose wherein said data includes information about the recording medium including the type of the recording medium. However, Sako discloses wherein said data includes information about the recording medium including the type of the recording medium ([0132]). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention was made to modify the teaching of Ozaki as taught by Sako in order to protect the copyrights of audio content and video content, thus prevent illegal copying.

15. As to claim 8, Ozaki doesn't explicitly disclose wherein said data includes decryption information for decrypting encrypted contents recorded on the recording medium. However, Sako discloses wherein said data includes decryption information for decrypting encrypted contents recorded on the recording medium ([0132]). Therefore, it

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would have been obvious to one of the ordinary skill in the art at the time of the invention was made to modify the teaching of Ozaki as taught by Sako in order to protect the copyrights of audio content and video content, thus prevent illegal copying.

16. As to claim 9, Ozaki discloses wherein said data further includes at least one of a serial number of the recording medium, disc information, and disc important information (col. 11, lines 29-32).

17. As to claim 10, Ozaki discloses wherein said copy protection information is a copy protect flag (col. 10, lines 20-26).

18. As to claim 11, Ozaki discloses wherein said disc information and said disc important information may be recorded in the wobbled pits (col. 5, lines 45-67).

19. As to claim 12, Ozaki discloses wherein said wobbled pits are detected by push-pull signal detection (col. 13, lines 17-28).

20. As to claim 13, Ozaki discloses wherein said disc information may be recorded in straight pits (col. 5, lines 45-67).

21. As to claim 14, Ozaki discloses wherein said straight pits are detected by RF signal detection (col. 7, lines 40-50).

22. As to claim 15, Ozaki discloses wherein said recorded data is recorded in straight pits and said straight pits are detected by RF signal detection (col. 7, lines 40-50).

23. As to claim 16, Ozaki wherein information about the recording medium including the type of the recording medium is recorded with modulation as straight pits positioned in said PIC zone, wherein the straight pits are not shifted from the track center (col. 5, lines 45-67).

24. As to claims 17 and 18, these are rejected using the same rationale as for the rejection of claim 1.

25. As to claim 19, Ozaki discloses wherein arrays of said pits shifted from the track center are formed intermittently at more than two places (col. 5, lines 45-67).

26. As to claim 20, Ozaki discloses wherein a length of an array of straight pits between arrays of said pits shifted from the track center is larger than a length of arrays of said pits shifted from the track center (col. 5, lines 45-67).

27. As to claim 21, Ozaki discloses wherein each of the arrays of said pits shifted from the track center has a different length (col. 5, lines 45-67).



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28. As to claim 22, Ozaki discloses wherein each of the arrays of straight pits between arrays of said shifted pits has a different length (col. 5, lines 45-67).

29. As to claim 23, it is rejected using the same rationale as for the rejection of claim 1.

30. As to claim 24, Ozaki discloses a method of reproducing data from a recording medium including recorded data (abstract), comprising: utilizing data recorded in pits formed along tracks (FIG. 1A, col. 5, lines 47-53), the data including copy protection information (col. 11, lines 29-32), wherein pits formed in some portions of the tracks are shifted from a track center to left and/or right to thereby form intermittent or alternate wobbled pits, wherein key information is encoded in a deviation shape of said pits shifted from the track center (FIG. 1A, col. 6, lines 45-57, col. 11, lines 29-32, col. 14, lines 27-57).

Ozaki doesn't explicitly disclose information for encryption and/or decryption. However, Sako discloses information for encryption and/or decryption ([0132]). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention was made to modify the teaching of Ozaki as taught by Sako in order to protect the copyrights of audio content and video content, thus prevent illegal copying.

31. As to claims 25 and 26, these are rejected using the same rationale as for the rejection of claim 24.

32. Claims 27-30, 32-36, 38-44, 46-51 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (European Patent: EP 1067540 A2) and further in view of Ozaki.

33. As to claim 27, Suzuki discloses a recording medium (abstract), comprising: indicating information indicating whether or not the recording medium contains copy protection information for use in generating or processing copy protected user data ([0009], [0017]), wherein the indicating information and/or the copy protection information are copied to a specific area ([0017], [0019]).

Suzuki doesn't explicitly disclose the indicating information and/or the copy protection information are formed as a wobbled pattern. However, Ozaki discloses the indicating information and/or the copy protection information are formed as a wobbled pattern (FIG. 1A, col. 6, lines 45-57, col. 11, lines 29-32, col. 14, lines 27-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Suzuki as taught by Ozaki in order to provide the advantage of wobbled pits and disc format to effectively prevent illegal reproduction of data (Ozaki, col. 7, lines 35-37).

34. As to claim 35, it is rejected using the same rationale as for the rejection of claim 27.

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35. As to claim 36, Suzuki discloses wherein at least the copy protection information and physical format information are copied to the specific area and the physical format information is used for recording or reproducing data ([0017], [0019], [0032], [0035]).

36. As to claim 38, Suzuki discloses wherein the indicating information and/or the copy protection information are recorded by a phase modulated method ([0017], [0019], [0032], [0035]).

37. As to claim 39, Suzuki discloses wherein the copy protection information is repeatedly recorded within a data unit ([0017], [0019], [0032], [0035]).

38. As to claim 40, Suzuki discloses wherein the data unit includes a plurality of address units, each of which includes a plurality of data frames, wherein the copy protection information is recorded in each first data frame ([0017], [0019], [0032], [0035]).

39. As to claim 41, Suzuki discloses a recording medium (abstract), comprising: first information for use in generating or processing copy protected user data ([0017], [0019]) and second information for use in generating or processing copy protected first information ([0009], [0017], [0019]), wherein the first information and/or the second information are copied to a specific area ([0009], [0017]). Suzuki doesn't explicitly disclose that the information are formed as a wobbled pattern. However, Ozaki

discloses that the information are formed as a wobbled pattern (FIG. 1A, col. 6, lines 45-57, col. 11, lines 29-32, col. 14, lines 27-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Suzuki as taught by Ozaki in order to provide the advantage of wobbled pits and disc format to effectively prevent illegal reproduction of data (Ozaki, col. 7, lines 35-37).

40. As to claims 28 and 42, Suzuki discloses wherein the first information is key information for use in encrypting/decrypting data ([0017]).

41. As to claims 29 and 43, Suzuki discloses further comprising: physical format information for recording or reproducing data ([0017], [0019], [0032], [0035]).

42. As to claims 30 and 44, Suzuki discloses wherein at least the first information and the physical format information are copied to the specific area ([0017], [0019], [0032], [0035]).

43. As to claims 32 and 46, Suzuki doesn't explicitly disclose wherein the second information is recorded by a bi-phase modulated method. However, Ozaki discloses (col. 5, lines 45-67, col. 11, lines 53-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of

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Suzuki as taught by Ozaki in order to provide the advantage of wobbled pits and disc format to effectively prevent illegal reproduction of data (Ozaki, col. 7, lines 35-37).

44. As to claims 33 and 47, Suzuki discloses wherein the first information is repeatedly recorded within a data unit ([0017], [0019], [0032], [0035]).

45. As to claims 34 and 48, Suzuki discloses wherein the data unit includes a plurality of address units, each of which includes a plurality of data frames, wherein the first information is recorded in each first data frame ([0017], [0019], [0032], [0035]).

46. As to claim 49, it is rejected using the same rationale as for the rejection of claim 41.

47. As to claim 50, Suzuki discloses wherein the first information is key information for use in encrypting/decrypting data ([0017], [0019], [0032], [0035]).

48. As to claim 51, Suzuki discloses wherein at least the first information and physical format information are copied to the specific area and the physical format information is used for recording or reproducing data ([0017], [0019], [0032], [0035]).

49. As to claim 53, Suzuki doesn't explicitly disclose wherein the second information is recorded by a bi-phase modulated method. However, Ozaki discloses wherein the

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second information is recorded by a bi-phase modulated method (col. 5, lines 45-67, col. 11, lines 53-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Suzuki as taught by Ozaki in order to provide the advantage of wobbled pits and disc format to effectively prevent illegal reproduction of data (Ozaki, col. 7, lines 35-37).

50. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki and further in view of Sako and Uranaka et al. (Patent No.: US 6,550,009 B1) (hereinafter "Uranaka").

51. As to claim 4, neither Ozaki nor Sako explicitly disclose wherein the wobble pits are in a burst cutting area (BCA) of an information area of the recording medium, and the BCA includes disc type information. However, Uranaka discloses wherein the wobble pits are in a burst cutting area (BCA) of an information area of the recording medium, and the BCA includes disc type information (col. 1, lines 7-12, col. 4, lines 62-65, col. 7, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the teaching of Ozaki and Sako as taught by Uranaka in order to store the copy protection information in the BCA of an optical disc because the information on the BCA is specially written using laser irradiation (col. 7, lines 55-65) which would be more difficult to falsify the discrimination bit information.

52. Claims 31, 37, 45 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki and further in view of Ozaki and Sako.

53. As to claims 31, 45 and 52, neither Suzuki nor Ozaki explicitly disclose wherein the specific area is an area within a lead- in area of the recording medium. However Sako discloses wherein the specific area is an area within a lead- in area of the recording medium ([0132]). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention was made to modify the teaching of Suzuki and Ozaki as taught by Sako in order to protect the copyrights of audio content and video content, thus prevent illegal copying.

54. As to claim 37, neither Suzuki nor Ozaki explicitly disclose wherein the specific area is an area within a lead- in area of the recording medium. However, Sako discloses wherein the specific area is an area within a lead- in area of the recording medium ([0132]). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention was made to modify the teaching of Suzuki and Ozaki as taught by Sako in order to protect the copyrights of audio content and video content, thus prevent illegal copying.

55. Examiner's note: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are

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applied to the specific limitations within the individual claim, other passages and figures may be applied as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention as well as the context of the passage as taught by the prior art or disclosed by the examiner.

### ***Conclusion***

56. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suman Debnath whose telephone number is 571 270 1256. The examiner can normally be reached on 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 571 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

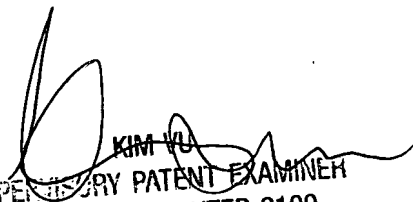
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